

REVZIN, I. S.

"Kinetic and mass-transfer characteristics of the interaction of carbon dioxide with coke in a flow at high temperatures."

report submitted for 2nd All-Union Conf on Heat & Mass Transfer, Minsk, 4-12 May 1964.

Inst of Heat and Mass Transfer, AS BSSR.

L 8835-66 EWT(1)/ETC/EPF(n)-2/ENG(m) WW
 ACC NR: AT5027200 UR/0000/65/000/000/0143/0147 66
 44,55 44,55 44,55 44,55 B+1
 AUTHOR: Ayerov, V.Ye.; Martynenko, O.G.; Revzin, I.S.; Fedorov, B.I.
 44,55
 ORG: Heat and Mass Transfer Institute, AN BSSR, Minsk (Institut teplo-
 i massoobmena AN BSSR)
 TITLE: Effect of the turbulizing of a stream of air on heat transfer
 in a radiator
 SOURCE: AN BSSR. Institut teplo- i massoobmena. Teplo- i massoobmen
 tel s okruzhayushchey gazovoy sredoy (Heat and mass exchange of bodies
 with the surrounding gaseous medium). Minsk, Nauka i Tekhnika, 1965,
 143-147
 21,44,55
 TOPIC TAGS: heat transfer, engine radiator, turbulent heat transfer
 ABSTRACT: Existing experimental data show that the use of a previously
 turbulized stream of air in various types of industrial heat exchangers
 can substantially increase their efficiency. Experiments were carried
 out on heat exchange in an oil radiator of the automobile type, with
 different degrees of turbulizing of the stream of air being blown through
 it. Hot oil from the lubricating system of a motor was circulated
 through a tube plate radiator. The article shows a sketch of the

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ACC NR: AT5027200

experimental setup. At constant loads and constant revolutions of the motor and the fan, measurements were made of the temperature of the walls of the radiator tubes as well as of the temperature of oil and air at the inlet and outlet of the radiator. In addition to the temperature measurements, determinations were made of the velocity field and the degree of turbulence of the stream of air before and after the radiator. Thermodynamic calculations based on the experimental data show that the efficiency of a radiator using a "pusher" fan increased by 25% on the average. The authors conclude that the installation of "pusher" fans on transport vehicles would permit a significant reduction in the size and weight of the radiator, which would make possible a substantial saving of nonferrous metal. Orig. art. has: 3 figures and 1 table

SUB CODE: ME/ SUBM DATE: 02Jul65/ ORIG REF: 004 OTH REF: 003

CVK

Card 2/2

REVZIN, I.S.; KHITRIN, L.N.

Investigation of high-temperature reduction of carbon dioxide
in a pulverized coke flow. Inzh.-fiz.zhur. 6 no.10:76-82 0 '63.
(MIRA 16:11)

1. Institut teplo- i massobmena, Minsk.

NAUMOVICH, V.M., doktor tekhn. nauk; RAKUSH, V.L., inzh.; REVZIN, L.L., inzh.;
DRAPKIN, V.Yu.

Adoption of the technological layout for peat briquetting in
the "Vertelishki" Plant. Torf. prom. 40 no.4:22-25 '63. (MIRA 16:10)

1. Institut torfa AN BSSR (for Naumovich). 2. Belgiprotorf (for
Rakush, Revzin). 3. Torfobriketnyy zavod "Vertelishki" (for
Drapkin).

(Grodno Province--Peat industry--Equipment and supplies)
(Briquets (Fuel))

Revzin, L.S.

✓ Luminescence of phosphors on gypsum base. V. L. Voznesenskiĭ, B. M. Nosenko, L. S. Revzin, and V. Va. Vaskolko. *Trudy Srednevol'skogo gos. univ. im. V. I. Lenina* 65, No. 12, 23-31 (1956).—Phosphors were prepd. by mixing CaSO_4 with 5% H_2SO_4 into a thick slurry to which an activator, in concns. from 0.1 mol.% to 10 mol.%, was added in dild. H_2SO_4 . After thorough mixing and drying in air at 150-200° for 24-30 hrs., the phosphors were annealed at 600-1200° for 10-12 min. The excitation of phosphors with an electron beam ($I = 10^{-4}$ – 10^{-5} amp./sq. cm., $E = 5$ e.kv.) inside the Faraday cylinder was carried out by the V. method (C.A. 49, 11424b). The activation with Co, Fe, Mg, and Ti gave pale-green luminescence of various shades; with Pb, dark blue; with Zn, blue; Ni, orange-red; and with Mn, brilliant light green. The last exhibited not only bright luminescence during the excitation but also had the most prolonged afterglow. Heated and excited $\text{CaSO}_4\text{[Mn]}$ (contg. 4 mol. % of the activator) gave only one max. in the luminescence curve. A change in the rate of heating from 1°/sec. to 0.15°/sec. had no effect on the max. and on the total yield of the luminescence. Storing of phosphors for 3 days at 17° resulted in a 50% loss of the luminescence yield. Several luminescence curves are given for phosphors with various activators.

A. P. Kotloby

Revzin, L. S.

USSR/Fitting Out of Laboratories -- Instruments, Their Theory, Construction, and Use, H

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1325

Author: Nosenko, B. M., Revzin, L. S., and Yaskolko, V. Ya.

Institution: Academy of Sciences, Uzbek SSR

Title: Applications of CaSO_4Mn in Dosimetry

Original
Periodical: Dokl. AN UzSSR, 1956, No 4, 3-4 (Uzbek Summary)

Abstract: The possibility of the application of the phosphor $\text{CaSO}_4\text{-Mn}$ to the dosimetry of β and γ -radiation over a broad range of intensities has been investigated. $\text{CaSO}_4\text{-Mn}$ stores a considerable amount of light energy during cathode excitation and thermally radiates this energy, losing 30-50% of the total absorbed energy in 8 hours at an ambient temperature of 20-40°. The luminescence was recorded with a type FEU-19 photometer. The radiation dose was determined from the maximum photocurrent recorded during luminescence. For radiation doses of 0.005-40 roentgen the luminescence yield is proportional to the

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USSR/Fitting Out of Laboratories -- Instruments, Their Theory, Construction, and Use, H

Abst Journal: Referat Zhur - Khimiya, No 1, 1957, 1325

Abstract: radiation dosage; at higher dosages the luminescence yield decreases uniformly as the dose is increased. A drawback of the proposed phosphor is a loss in luminescence yield with time. The sensitivity of dosimeters using $\text{CaSO}_4\text{-Mn}$ is equal to that of dosimeters using Sr-Sm-Eu . The proposed phosphor has the advantage that it cannot store light energy under irradiation with visible light, does not require a special device for IR light and additional thermal luminescence, and does not require corrective lead shielding of the dosimeter.

Card 2/2

Revzin, L.S.

539.165.08 : 539.166.08 : 535.37
 2592. APPLICATION OF THE $\text{CaSO}_4(\text{Mn})$ PHOSPHOR IN-
 DOSIMETRY. B.M. Nosenko, L.S. Revzin and V.Ya. Yaskolko.
 Zh. tekhn. Fiz., Vol. 26, No. 8, 2046-8 (1956). In Russian.
 The authors discovered earlier (Voznesenski, Nosenko, Revzin,
 Yaskolko, Sbornik Trudov Sredne-Aziatskogo Gosudarstvennogo
 Universiteta, nov. ser., fizika, 23, 1955) that this phosphor is capable
 of storing the light-sensitized by cathode or X-ray excitation and
 to subsequently flash it up by heat. The phosphor was used for a
 β -(W^{182}) and γ -(Ag^{110} and Co^{60}) dosimetry. The merits of the phosphor
 are discussed. F. Lachman

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Central Asian State Univ. V.I. Lenin, Tashkent

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LC

51-4-8/26

AUTHORS: Nosenko, B. M., Revzin, L. S. and Yaskolko, V. Ya.

TITLE: On Phosphors Based on CaSO_4 . (O fosforakh na osnove CaSO_4).

PERIODICAL: Optika i Spektroskopiya, 1957, Vol.III, Nr. 4, pp.345-350. (USSR)

ABSTRACT: The phosphor $\text{CaSO}_4\text{-Mn}$ was used to study far ultraviolet radiation of the sun (Ref.5). The property of storing the light-sum on excitation by short ultraviolet wavelengths and emitting it on heating, possessed by this phosphor, was found to be very useful (Refs 5 and 7). The present authors found that $\text{CaSO}_4\text{-Mn}$ can store light-sum on excitation with electrons (cathodoluminescence), X-rays, β -rays and γ -rays. This property makes it possible to use the phosphor as a dosimeter of radioactive radiations. The present paper reports results of a more detailed investigation of the properties of $\text{CaSO}_4\text{-Mn}$, some of which have already been published (Refs. 8, 9). The emission spectrum on electron excitation was recorded by a spectrograph ИСН-51.

and 1/5

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On Phosphors Based on CaSO_4 .

Photometric measurements of spectrograms were carried out using a microphotometer $\text{M}\Phi$ -2. Pure CaSO_4 did not emit even when strong electron beams were directed on to it. Activation (from 0.1 to 10 mol.%) with Co, Fe, Mg, Tl, Ag, Pb, Zn, Ni and Mn made it possible to obtain emission in any region of the visible spectrum. Fine-grain structure, good binding properties and stability under ion bombardment and thermal treatment, make CaSO_4 of special interest. Brightness of thermoluminescence of the phosphors studied was measured by means of photo-multiplier. The magnitude of the photo-current was recorded on a film, together with temperature of the screen to which the phosphor was attached. The stored light-sum was found by integration of the area under the thermoluminescence curves. All the phosphors prepared could store light energy on excitation with electrons, X-rays, β -rays and γ -rays, emitting this energy on heating. CaSO_4 -Mn was studied in greatest detail. Magnitude of the light-sum stored

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On Phosphor Based on CaSO_4 .

was no less than that stored on photo-excitation. On cathodo-excitation (i.e. by electrons) the light-sum stored depends on: duration of excitation, electron-current density and electron energy. At small charge densities produced by electrons the light-sum is approximately proportional to this charge density. At higher charge densities saturation of the light-sum occurs. At small charge densities the light-sum is also proportional to the electron energy, while in the region of saturation the light-sum varies as the square of the electron energy. If the phosphor is kept for a long time it gradually loses its stored light energy. An absolute value quoted by the authors for the light-sum stored on excitation with 5 keV energy is about 20 apostilb-minutes in the region close to saturation. The mechanism of the described storage effect in $\text{CaSO}_4\text{-Mn}$ is undoubtedly of a recombination type, since Lepper (Ref.11) has showed that capture centres belong to CaSO_4 lattice and are not due to the activator. To find whether the mechanism of emission is mono- or bimolecular, $\text{CaSO}_4\text{-Mn}$ was irradiated with β -rays from W^{185} and by

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51-4-8/26

On Phosphors Based on CaSO_4 .

Co^{60} γ -rays. The phosphor layer on the screen was 2-3 mg/cm^2 thick. The authors consider various criteria put forward in Refs. 13-15, and come to the conclusion that the emission mechanism in $\text{CaSO}_4\text{-Mn}$ is bimolecular. To test the $\text{CaSO}_4\text{-Mn}$ phosphor as a radioactive dosimeter it was deposited on metal screens in layers 2.6 mg/cm^2 thick, and was irradiated with γ -rays from Co^{60} and Ir^{192} , as well as with β -rays from W^{185} . The light-sum stored on irradiation with β - and γ -rays was recorded by means of a photo-multiplier $\Phi\text{ЭY-19}$ and a galvanometer. From 0.005 to 50 rontgens the light-sum is proportional to the irradiation dose. At higher doses this proportionality is not obeyed, but saturation is not reached even at 1000 rontgens. The main disadvantage of the $\text{CaSO}_4\text{-Mn}$ phosphor as a dosimeter is its loss with time of the light energy stored. For durations of storage not greater than 8 hours, $\text{CaSO}_4\text{-Mn}$ is not inferior to SrS-Sm,Eu , and the accuracy of dosimeters made from $\text{CaSO}_4\text{-Mn}$ and SrS-Sm,Eu is of the same order. The advantages of $\text{CaSO}_4\text{-Mn}$ are as follows:

Card 4/5

REVZIN L.S.

48-5-26/56

SUBJECT: USSR/Luminescence

AUTHORS: Nosenko B.M., Revzin L.S. and Yaskolko V. Ya.

TITLE: On Phosphors Based on CaSO_4 (O fosforakh naosnove CaSO_4)

PERIODICAL: Izvestiya Akademii Nauk SSSR, Seriya Fizicheskaya, 1957, Vol 21, #5, pp 691-692 (USSR)

ABSTRACT: Properties of phosphors based on CaSO_4 were studied at electronic excitation and also at gamma- and beta-irradiation. The thermal luminescence of $\text{CaSO}_4\text{-Mn}$ was investigated in detail. The activation of CaSO_4 by Co, Fe, Mg, Tl and Ag produced a weakly greenish luminescence, the activation by Pb produced dark blue, by Zn - sky-blue, by Ni - orange-red, and by Mn - bright light-green luminescence.

The CaSO_4 luminophore activated by any activator possessed thermal luminescence after electronic, gamma- and beta-excitation. The highest ability of storing was shown by $\text{CaSO}_4\text{-Mn}$.

The CaSO_4 phosphor was used as a dosage meter. Dosages from

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48-5-26/56

TITLE: On Phosphors Based on CaSO_4 (O fosforakh na osnove CaSO_4)

0.005 to hundreds of roentgens could be measured by using a photomultiplier with a galvanometer for determination of brightness with a screen of 1.5 cm^2 area. One of the advantages of applying CaSO_4 for this purpose is its non-sensitivity to visual light.

The report was followed by a discussion.

Two Russian references are cited.

INSTITUTION: Central-Asian State University im. Lenin

PRESENTED BY:

SUBMITTED: No date indicated

AVAILABLE: At the Library of Congress.

Card 2/2

REVZIN, L. S., Candidate Phys-Math Sci (diss) -- "Thermoluminescence of the phosphor $\text{CaSO}_4\text{---Mn}$ and its practical utilization". Tashkent, 1958, published by SAGU. 7 pp (Min Higher Educ, Central Asia State U im V. I. Lenin), 150 copies (KL, No 22, 1959, 108)

11915-66 EWT(m)/EWP(t)/EWP(b) DIAAP/IJP(c) JD
 ACC NR: AP6001659 SOURCE CODE: UR/0051/65/019/006/0980/0982

AUTHOR: Nosenko, B. M.; Revzin, L. S.; Yaskolko, V. Ya.

ORG: None

TITLE: Determination of some parameters of beta-particle tracks in $\text{CaSO}_4\text{-Mn}$

SOURCE: Optika i spektroskopiya, v. 19, no. 6, 1965, 980-982

TOPIC TAGS: beta particle, luminescent material, luminescence

ABSTRACT: The authors note that when a luminescent material is excited by ionizing radiation, the true density is not the mean density of excitation, but the excitation density in the track (the quantity of ionized energy losses per unit of track volume). However, the establishment of the true density entails the difficulty of determining the excitation density in the track which does not require a knowledge of the track volume and which makes use only of luminescence experiments. The method described is based on the fact that there is always a certain overlapping of the branches of a beta-particle track and, consequently, an increase in the mean excitation density in the track of a beta-particle is equal to the effective density of cathode excitation (in the same luminescent material) when the value of the relative storage is $g = 8$. The dependence of the relative storage factor on the density of cathode excitation is studied for $\text{CaSO}_4\text{-Mn}$ (1 mol. %). Orig. art. has: 5 formulas.

UDC: 535.373.1:548.0

Card 1/2

Card 2/2

KRASNAYA, A.R.; REVZIN, L.S.; YASKOLKO, V.Ya.

Preparation of phosphors on the basis of CaSO_4 . Nauch. trudy
TashGu no.221.Fiz. nauki no.21:71-78 '63. (MIRA 17:4)

KRASNAYA, A.R.; NOSENKO, B.M.; REVZIN, L.S.; YASKOLKO, V.Ya.

Exoelectronic emission of $\text{CaSO}_4\text{-Mn}$, and $\text{CaSO}_4\text{-Sm}$ phosphors.
Opt. i spektr. 7 no.4:526-528 Ap '62. (MIRA 15:5)
(Electrons--Emission) (Phosphors)

24.3500

37224

S/051/62/012/004/012/015
EO39/E485

AUTHORS: Krasnaya, A.R., Nosenko, B.M., Revzin, L.S.,
Yaskolko, V.Ya.

TITLE: On the exoelectronic emission of the phosphors
 CaSO_4 , $\text{CaSO}_4 - \text{Mn}$, $\text{CaSO}_4 - \text{Sm}$

PERIODICAL: Optika i spektroskopiya, v.12, no.4, 1962, 526-528

TEXT: Earlier work on this subject is reviewed and the results shown to lack agreement. An investigation of the exoemission of the phosphors CaSO_4 , $\text{CaSO}_4 - \text{Mn}$ and $\text{CaSO}_4 - \text{Sm}$ was therefore undertaken. The apparatus used and method of measurement are described briefly. The phosphors were excited by a Sr^{90} β source and the results are shown graphically; exoemission plotted against temperature for each phosphor. The exoemission for $\text{CaSO}_4 - \text{Mn}$ has two peaks with maxima at 100 and 144°C, while the thermo-luminescence curve shows only one peak. CaSO_4 has only one peak on its exoemission curve with a maximum at 134°C. When Mn is added, new capture centres are formed and the general intensity of emission is increased. In the case of $\text{CaSO}_4 - \text{Sm}$ exoemission is not observed while its thermoluminescence curve

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E039/E485

On the exoelectronic ...

shows three peaks. This shows that exoemission from CaSO_4 is strongly influenced by the activator and that there is no correspondence between thermoluminescence and exoemission. The difference between these results and those of earlier workers appears to be due to differences in the method of preparation of the phosphors. The results are compared with a model suggested by A. Bogun and it is shown that the absence of a second peak in the thermoluminescence curve for CaSO_4 -Mn can only be explained on the basis of the temperature of quenching (luminescence). In CaSO_4 -Mn this occurs at 200°C . The full suppression of exoemission by Sm requires the assumption of pure hole characteristics for the luminescence of CaSO_4 -Sm on this model which is contrary to the results obtained. The effect of electron diffusion length is also discussed. It is concluded that exoemission is due mainly to defects in the non-luminescent surface layers while the thermoluminescence is due to defects in the volume of the crystal. Further experiments are required for the verification of these results. It is suggested that the

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On the exoelectronic ...

S/051/62/012/004/012/015
E039/E485

method is a valuable one for the study of the surface layers
of crystals. There is 1 figure.

SUBMITTED: September 26, 1961

Card 3/3

KRASNAYA, A.R.; NOSENKO, B.M.; REVZIN, L.S.; YASKOLKO, V.Ya.

Application of $\text{CaSO}_4(\text{Sm})$ phosphor in dosimetry. Atom.energ. 10
no.6:630-631 Je '61. (MIRA 14:6)

(Phosphors) (Drugs—Dosage)

23742

S/089/61/010/006/008/011
B102/B212

21. D100 (1138, 1033, 1558)

AUTHORS:

Krasnaya, A. R., Nosenko, B. M., Revzin, L. S.,
Yaskolko, V. Ya.

TITLE:

Use of a CaSO_4 - Sm phosphor in dosimetry

PERIODICAL:

Atomnaya energiya, v. 10, no. 6, 1961, 630 - 631

TEXT: The authors suggested a dosimeter (Zh. Tekhn. fiz., 26, 2046 (1956)), which will operate with CaSO_4 -Sm phosphor and exhibits a limited ability for the conservation of the light sum stored. For this purpose CaSO_4 -based phosphors with a plurality of activators have been investigated with respect to their luminescent properties. It was found that CaSO_4 -Sm only will combine the properties of a good storage ability of the light sum with sufficient sensitivity. This phosphor has been further investigated. The thermal - deexcitation curve of this phosphor shows three peaks: at 65, 120 and 200°C (at a heating rate of 40 deg/sec.). The light sum of the last peak amounts to 90 % of the total light sum. X

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23742

Use of a CaSO_4 - ...

S/089/61/010/006/008/011
B102/B212

The thermoluminescence spectrum of the phosphor consists of three narrow bands having maxima at 6200, 5900 and 5600 Å; their intensities behave like 56 : 43 : 1; the spectrum does not change during extinction. The light sum stored by the phosphor is a linear function of the radiation dose of 0.1 ~ 25 000 r; the dose rate (0.005 ~ 10⁴ r/hr) influences the stored light sum not directly. The sensitivity of the CaSO_4 -Sm phosphor amounts to about 1/10 of that of the CaSO_4 -Mn phosphor. A comparison of the stored light sums of these phosphors (by blackening of a photographic plate) shows that the "absolute" sensitivity of the CaSO_4 -Sm phosphor is 2.5 times greater than that of CaSO_4 -Mn phosphor if the spectral sensitivity is taken into account. Keeping the phosphor at an increased temperature (40 - 120°C) will decrease the light sum and change the spectrum (at the beginning the first two peaks become weaker, at 70°C the de-excitation of the third peak also starts). At a weak but long radiation of the phosphor practically no losses of the light sum will occur; this has been found in a 42 days long radiation with 0.005 r/hr.

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Use of a CaSO_4 - ...

S/089/61/010/006/008/011
B102/B212

The stored light sum measured was equal to that calculated (corresponding to a dose of 5r). This property of the phosphor makes it possible to employ it for dosimetric purposes, even at small doses. This phosphor (like CaSO_4 -Mn) cannot be excited by visible light (direct solar radiation) but in contrast to CaSO_4 -Mn visible light is causing de-excitation (0.5 lux for 4 hrs will cause a 25 % loss of the stored light sum). Since CaSO_4 -Sm is keeping the stored light sum much longer than CaSO_4 -Mn, this phosphor is very well suited for permanent measurements, even at higher temperature (up to 100°C). There are 1 figure and 1 Soviet-bloc reference. X

SUBMITTED: December 15, 1960

Card 3/3

NOSENKO, B.M.; REVZIN, L.S.; YASKOLKO, V.Ya.; KHASNAYA, A.R.

Thermoluminescence associated with various modes of excitation.
Izv.AN SSSR. Ser. fiz. 25 no.3:318-321 Mar '61. (MIRA 14:2)

1. Kafedra optiki Tashkentskogo gosudarstvennogo universiteta imeni
V.I. Lenina.
(Luminescence)

208114

9.6150
24,3500 (1137, 1138, 1395)

S/048/61/025/003/002/047
B104/B201

AUTHORS: Nosenko, B.M., Revzin, L.S., Yaskolko, V.Ya.,
and Krasnaya, A.P.

TITLE: Thermoluminescence with different modes of excitation

PERIODICAL: Izvestiya Akademii nauk SSSR. Seriya fizicheskaya,
v. 25, no. 3, 1961, 319 - 321

TEXT: This is a reproduction of a lecture delivered at the 9th Conference
on Luminescence (Crystal Phosphors), which took place in Kiyev from June
20 to 25, 1960. The authors used $\text{CaSO}_4\text{-Mn}$, $\text{PbSO}_4\text{-Mn}$, $\text{Zn}_2\text{SiO}_4\text{-Mn}$, ZnS-Ag
and ZnS-Cu phosphors to find the light sums of steady luminescence S_{st} ,
afterglow S_a , and thermoluminescence S_{th} , produced by electron excitation
($\nu = 0.5 - 7 \text{ kev}$, $j = 10^{-5} - 10^{-10} \text{ a/cm}^2$), beta radiation (S^{35} , $40\text{-}500 \mu\text{C}$)
and photo-irradiation (NPK -2 (PRK-2)-tube with filter). The specific
light sums γ_{st} , γ_a and γ_{th} were also determined. Measurements were made
in the temperature range from -180° to $+30^\circ\text{C}$ at heating rates of 60°C/min

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Thermoluminescence with ...

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B104/B201

and 150°C/min. The excitation densities were intercompared on the basis of the number of the excited ion pairs \bar{n} , produced per unit volume and per unit time. The measurement results are discussed for every phosphor, separately. $\text{CaSO}_4\text{-Mn}$ has at 90°C a main peak of thermoluminescence; measured values corresponding to this peak are listed in Table 1. Table 2 gives the dependences of the specific light sums on temperature. $\text{PbSO}_4\text{-Mn}$ has one peak of thermoluminescence at 54°C, the relative light sums being equal under beta excitation and electron excitation, and about 2.5 times as large as in the case of photoexcitation. On a temperature rise up to room temperature, the relative light sum produced by beta excitation increases by the sixfold at the expense of steady luminescence. The spectrum has two bands, an orange band of manganese ($\lambda_m = 615 \text{ m}\mu$), and a blue band of PbSO_4 ($\lambda_m = 425 \text{ m}\mu$). A photoexcitation yields an orange luminescence at all temperatures, and also an orange thermoluminescence. An electron excitation gives rise to an orange luminescence at room temperature, which turns blue on a temperature drop. Beta excitation produces a blue luminescence with a small orange portion. $\text{Zn}_2\text{SiO}_4\text{-Mn}$ has two peaks of

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B104/B201

Thermoluminescence with ...

thermoluminescence (a complicated one at -88°C , and one at 75°C). ZnS-Cu has a green band and two peaks of thermoluminescence (at -53°C and 22°C). More details are given in Table 3. ZnS-Ag has a complicated peak of thermoluminescence, which can be separated into two maxima: one at -103°C and one at -64°C . More data are given in Table 4. A fluorescence effect of the cathode rays is observed on thin layers of the said phosphor, which are practically transparent to the exciting light. The phosphor is excited up to saturation by an ultraviolet radiation with $\lambda = 365 \text{ m}\mu$. The final part of the paper deals with differences between excitation by corpuscular radiation and by photons; it is stated in this connection, that a consideration of excitation density and excitation depth well explains the differences observed. The appearance of the fluorescence effect of the cathode rays is explained by the fact that on an excitation of luminescence by electrons the electric field produced by particle charges in the crystal leads to a fluorescence. There are 4 tables and 6 Soviet-bloc references.

ASSOCIATION: Kafedra optiki Tashkentskogo gos. universiteta im. V. I. Lenina (Department of Optics of Tashkent State University imeni V. I. Lenin)

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208114

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B104/B201

Thermoluminescence with ...

Legend to Table 1: 1) type of excitation; 2) specific light sum of thermoluminescence at 20°C; 3) the same at 180°C; 4) particle energy in ev.; 5) \bar{n} ; 6) \bar{N} number of ion pairs produced per unit volume during excitation; 7) N_t number of ion pairs produced in one particle track. A) excitation by electrons, B) beta excitation.

Таблица 1

1	2	3	4	5	6	7
тип воз- буждения	$\bar{n}_T (T_{CT} = 20^\circ)$	$\bar{n}_T (T_{CT} = 180^\circ)$	V_{CT}	\bar{n} см ⁻³ сек ⁻¹	\bar{N} см ⁻³	N_t см ⁻¹
A KB	2,8	1,4	1500	10^{18}	10^{18}	10^{17}
B BB	1,4	0,7	15÷180	$10^{13} + 10^{14}$	$10^{13} + 10^{14}$	10^{13}

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Thermoluminescence with ...

СООБЩ
S/048/61/025/003/002/047
B104/B201

Legend to Table 2: temperature dependence of specific light sums of thermoluminescence (A), steady luminescence (B), and the ratio $\eta_r = \gamma_{th}/\gamma_{st}$ (C).

Таблица 2

Измеряемая величина	$T_{ст} = 23^\circ$	0°	-10°	30°	-40°	-50°	-127°	-170°
A) γ_r	256	234	228	200	185	158	143	135
B) $\gamma_{ст}$	183	164	160	155	147	145	160	173
C) η_r	1,4	1,42	1,42	1,28	1,25	1,1	0,9	0,78

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S/048/61/025/003/002/047

B104/B201

Thermoluminescence with ...

Legend to Table 3: 1) mode of excitation, 2) η_{π} = specific light sum of afterglow divided by that of thermoluminescence, 3) $\eta_{\tau} = \chi_{\tau} / \chi_{ct}$, 4) and 5) the same as sub 3) referred to the two peak temperatures. 6) \bar{n} , 7) \bar{N} , 8) particle concentration. A) photoexcitation, B) beta excitation, C) electron excitation.

Таблица 3

1	2	3	4	5	6	7	8
Вид воз- буждения	η_{π}	η_{τ}	η_{τ_1}	η_{τ_2}	\bar{n} , см ⁻² сек ⁻¹	\bar{N} , см ⁻³	N , см ⁻³
A { ФВ-1	0,02	0,04	0,03	—	10 ¹²	10 ¹⁶	—
ФВ-2	0,04	5,5	1,0	4,5	10 ¹²	10 ¹⁶	10 ¹⁸
B BП	0,03	2,0	—	—	10 ¹⁶ + 10 ¹⁸	10 ¹⁶ + 10 ²⁰	10 ¹⁷
C KB	Не изме- ряется	0,23	0,15	0,07	—	—	—

Card 6/7

Thermoluminescence with ...

20014
S/048/61/025/003/002/047
B104/B201

Legend to Table 4: 1) mode of excitation, 2) U in kev, 3) number of ion pairs produced per cm^3 of particle track, 4) \bar{N} , 5) light sum of thermoluminescence in relative units, 6) thickness of excited layer, 7) $\eta_{\text{II}} = j_{\text{a}} / j_{\text{st}}$, i.e. specific light sum of afterglow divided by the specific light sum of thermoluminescence, 8) $\eta_{\text{T}} = j_{\text{th}} / j_{\text{st}}$, i.e., specific light sum of thermoluminescence divided by steady luminescence, 9) saturation, 10) limit value of light sum of afterglow, A) photoexcitation, B) electron excitation.

Таблица 4

1 Вид воз- буждения	2 U , kev	3 $N_{\text{д}}$, см^{-3}	4 \bar{N} , см^{-3}	5 $I_{\text{ст}}$, отн. едн.	6 l , см	7 η_{II}	8 η_{T}	9 Насыщение	10 S_{T} пре- дельный
A) 1:2	—	—	10^{15}	$3 \cdot 10^3$	$2 \cdot 10^{-3}$	0,1	0,3	Нет	—
	—	—	10^{17}	10^4	$2 \cdot 10^{-3}$	$2 \cdot 10^{-3}$	—	По S_{T}	$2 \cdot 10^4$
	—	—	10^{19}	—	—	—	—	—	—
B) KB	3	10^{17}	10^{19}	1,5	$3 \cdot 10^{-4}$	$5 \cdot 10^{-3}$	$15 \cdot 10^{-3}$	Нет	—
	—	—	10^{21}	10^{-3}	—	—	—	—	—
	3	10^{17}	—	—	$3 \cdot 10^{-4}$	—	—	По $I_{\text{ст}}, S_{\text{II}}, S_{\text{T}}$	$2 \cdot 10^3$
	0,5	10^{17}	$5 \cdot 10^{21}$	—	—	—	—	—	$3 \cdot 10^2$

Card 7/7

1971, 1972.

Standard table for the preparation of liquid drugs by the volumetric weight method; Apt. deln II no. 4013-49 JI Ag '62.

(MIRA 17:11)

1. Apteka No. 182 Dnepropetrovsk.

REVZIN, M.B., provizor.

Preparation of injections of dibazole. Apt.delo 7 no.6:38 N-D '58
Apt.delo 7 no.6:38 N-D '58 (MIRA 11:12)

1. Iz apteki bol'nitsy imeni I.I. Mechnikova (Dnepropetrovsk, USSR).
(BENZIMIDAZOLE)
(INJECTIONS)

REVZIN, M.B., provizor

Preparation of injections by a gravivolumetric method. Apt. delo
7 no. 2:44-46 Mr-Apr '58. (MIRA 11:4)

1. Apteka bol'nitsy imeni I.I. Mechnikova (glavnyy vrach Ye.N. Kiselev),
Dneporpetrovsk.
(INJECTIONS)

L 34884-65 EWT(1)/EWA(h) Feb

ACCESSION NR: AP5006043

S/0141/64/007/006/1223/1226

AUTHOR: Al'tshuler, Yu. G.; Anisimov, Ye. V.; Revzin, R. M.

TITLE: Experimental investigation of a traveling-wave strophotron

SOURCE: IVUZ. Radiofizika, v. 7, no. 6, 1964, 1223-1226

TOPIC TAGS: strophotron, traveling wave strophotron, electron frequency tuning, frequency pulling

ABSTRACT: The basic characteristics of a traveling-wave strophotron generator with electric frequency tuning were studied experimentally. A nearly parabolic electrostatic potential well was utilized in the tube. Power output was through a coaxial line connected to reflectors at the cathode end of the tube. The traveling-wave mode was effected by matching of the power output and an external load (a power meter) with an absorbing load applied to the collector end of the tube. The latter took the form of a lumped resistance of a value equal to the characteristic impedance of the hf system. When the interval matching resistance of the system differed considerably from the characteristic impedance, the bands of electron frequency tuning narrowed sharply, and frequency pulling and spurious oscillations occurred. In addition, magnetic field strength, collector voltage, filament current, and length of the

Card 1/2

L 34884-65

ACCESSION NR: AP5006043

interaction space affected only slightly the frequency characteristics of the strophotron. In terms of generated power and band width, the traveling-wave strophotron was found to be fully comparable to (and structurally simpler than) the "O"-type backward-wave tube. Orig. art. has: 6 figures. [JR]

ASSOCIATION: Saratovskiy gosudarstvennyy universitet (Saratov State University)

SUBMITTED: 05Jun64

ENCL: 00

SUB CODE: EC

NO REF SOV: 001

OTHER: 002

ATD PRESS: 3212

Card 2/2

ANZIL, S.

"The Leap; a short story." p. 30, (AVIATIA SPORTIVA, Vol. 5, No. 8, Aug. 1954, Bucuresti, Rumania)

SO: Monthly List of East European Accessions, (EEAL), LC, Vol. 4, No. 1
Jan. 1955, Uncl.

REVZIN, S. V.

Author: Revzin, S. V.

Title: Stratosphere Ballon--Parachute.
82 pp., illus.

Date: 1946.

Subject: 1. Balloons. 2. Atmosphere, upper.

Available: Library of Congress, Call No: TL621.K8R4

Source: Lib. of Cong. Subj. C_at., 1950

STOBROVSKIY, N.G.; REVZIN, S.V., redaktor; RUSHKOVSKIY, N., tekhnicheskiy
redaktor

[Aeronautics] Vozdukhoplavanie. Moskva, Izd-vo DOSARM, 1949. 64 p.
[Microfilm] (MLRA 10:1)
(Balloons) (Airships)

REVZIN, S

V

N/5
666
.R98

Svobodnoye Vozdukhoplavaniye (Free Flying) Moskva, Izd-vo DOSAAF, 1951.

122 p. Illus., Diagr.

"Literatura": p. (121)

At Head of Title: Vsesoyuznoye Dobrovel'noye Obshchestvo Sodeystviya
Armii, Aviatsii i Floty.

REIZIN', B. V.

Meteorology

Atmosphere scouts., Nauka i zhizn', 19, no. 3, 1952.

9. Monthly List of Russian Accessions, Library of Congress, May 1952 ~~X1953~~, Uncl.

REVZIN, S. V.

Stratostat-parashuit. Sverdlovsk, Sidrometeoizdat, 1946. 82 p.,
illus., group port., map.
Title tr.: Stratostat-parachute.

TL621.K8R4

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of
Congress, 1955.

REVZIN, S.V.; KHALEPSKIY, B., redaktor; CHISTYAKOV, A., tekhnicheskiiy redaktor

[Free balloon flight] Svobodnoe vozdukhoplavanie. Moskva, Izd-vo
DOSAAF, 1951. 122 p. [Microfilm] (MIRA 10:7)
(Balloons)

POLOSUKHIN, Porfiri Porfir'yevich, zasluzhennyy master sporta. Prinsipal
uchastiye: REVZIN, Sergey Vladimirovich, inzh.-vozdukhoplavatel'.
SUMAROKOVA, T.N., red.; MANINA, M.P., tekhn.red.

[Notes of an amateur navigator and parachutist; as told to Sergei
Revzin] Zapiski sportsmena-vozdukhoplavatelya i parashyutista.
Literaturnaya zapis' Sergeia Revzina. Izd.3., dop. i perer.
Moskva, Gos.izd-vo "Fizkul'tura i sport," 1958. 230 p.

(MIRA 12:12)

(Polosukhin, Porfiri Porfir'yevich, 1910-)

GORYACHEV, Ye.Z., inzhener; IVANOV, Ye.G., inzhener; NIKITINA, A.A., inzhener;
PESTRIKOV, V.V., inzhener; YEL'SKIY, I.M., inzhener; KOROSTELIN, V.P.,
inzhener; LEVZIN, Ya.A., inzhener.

Operation practices of the Kuybyshev automatic telegraph. Vest.sviazi
16 no.2:17-20 P '56. (MLRA 9:7)

1.Nachal'nik Kuybyshevskogo telegrafa (for Goryachev).
(Kuybyshev--Telegraph--Perforating system)

REVZIK, Ya. A., GORYACHEV, Ye. Z. and KOROSTELIN, V. P.

"Automatization of Daudot Equipment in the Kuybyshev Central Telegraph Office," Vest. Svyazi, No.11, pp 3-5, 1953

Translation No. 420, 22 Jun 55

REVZIN, Yu.V.; PYSHKALO, A.M. (Moskva)

Calculation of the theoretical weight of machine parts and some other problems. Mat.v shkole no.4:51-55 J1-Ag '59.

(MIRA 12:11)

(Mathematics--Study and teaching)

Name: REVZINA, A. A.

Dissertation: Development of the skeleton of wrist and foot in the embryonic period in man

Degree: Cand Med Sci

defended at
~~Affiliation:~~ Min Health RSFSR, Stalingrad State Medical Inst

publication
Defense Date, Place: 1956, Stalingrad

Source: Knizhnaya Letopis', No 45, 1956

REUZINA, F.S.

Distr: ⁷ ~~hE4j/hE2c~~ ⁷⁵

¹⁸ ⁸ ²
~~Chromite-magnesite roofs of open-hearth furnaces. A. A. Gurenko, S. Z. Slonimskaya, E. M. Shumakov, and R. S. Reuzina. *Sovetsk. Nauch. Tekhn. Priborost.* Nauch.-Tekhn. Inst. Dnepropetrovsk 1955 (1958), No. 1, 24-46; Referat. Zhur., *Met.* 1956, Abstr. No. 9744. To insure min. shrinkage and high resistance toward Fe oxides, the raw materials should contain not more than 20% of chromite, the chro-~~

FOMIN, G.M.; KHIROMOV, P.I.; RYABCHIKOVA, O.A.; REVZINA, F.S.
YEGOROV, V.D.

New wire rope construction for skip hoisters on blast
furnaces of the Magnitogorsk Metallurgical Combine. Metallurg
6 no.10:31-33 0 '61. (MIRA 14:9)

1. Magnitogorskiy kalibrovochnyy zavod i Nauchno-issledovatel'-
skiy institut metiznoy promyshelnosti.
(Magnitogorsk--Blast furnaces--Equipment and supplies)
(Wire rope)

ACC NR: AP5028610

(N)

SOURCE CODE: UR/0337/65/000/011/0036/0037

AUTHOR: Yegorov, V. D.; Mamykina, E. M.; Khromov, P. I.; Revzina, F. S.ORG: NIImetiz - MKZTITLE: Use of polymeric materials for steel cable coatings¹⁵

SOURCE: Rybnoye khozyaystvo, no. 11, 1965, 36-37

TOPIC TAGS: protective coating, polycaprolactam resin, wire product, connecting cable /
LK-O connecting cable, TK connecting cable¹⁷

ABSTRACT: The results of testing steel cables with coatings made of capron material¹⁵ (polycaprolactam resin and fiber) are presented. The best results were obtained with coating films of up to 0.7-mm thickness formed on steel cable cores of up to 6-mm at temperatures of 230, 240, 255 and 260 C. It is mentioned that parkerized core wires have the best adhesive properties (40 kg/sq cm) while vitrified wires have the lowest adhesion (12 kg/sq cm). The effects of various core temperatures (150 to 600 C) on the adhesive and mechanical properties of capron films were studied and a temperature of about 400 C is recommended for preheating of cores. The cables made of coated strands shows the best endurance (3.3 times greater). The test proved that a 0.5-mm film produced a 2 to 3 times increase in cable endurance. A further increase of the film thickness had little effect on the cable endurance. The steel cables with coated strands of LK-O type (6 x 19 + 7 x 7; d = 25 mm) and of TK type (6 x 37 + 1 core; d = 15 mm) were prepared and successfully used on fishing ships. Their cross-sections are shown. Orig. art. has: 2 figures.

SUB CODE: 11, 13/ SUBM DATE: None

Card 1/1

00261-47 INT(e)/INT(m) MH
ACC NR: AP6029974

SOURCE CODE: UR/0413/66/000/015/0166/0166

INVENTORS: Frenkel', A. S.; Antonov, G. I.; Berman, Sh. M.; Shapovalov, V. S.;
Minkovich, B. D.; Revzina, F. S.

ORG: none

TITLE: A method for producing basic refractory products. Class 80, No. 184693
/announced by Ukrainian Scientific Research Institute of Refractories (Ukrainskiy
nauchno-issledovatel'skiy institut ognenuporov)/

SOURCE: Izobret prom obraz tov zn, no. 15, 1966, 166

TOPIC TAGS: refractory product, refractory compound, powder metal, powder metallurgy,
magnesite, magnesium compound

ABSTRACT: This Author Certificate presents a method for producing basic refractory
products from pressed powder containing magnesite by forming this powder. To produce
a consistently uniform volume of the products, melted materials such as magnesite,
spinel, and forsterite are introduced into the pressing powder. Their amount is
30--70% of the pressed powder by weight. The products may be fired in an oxidizing
medium at a temperature of 1750--1800C.

SUB CODE: 13,11/ SUBM DATE: 22Jun64

Card 1/A

UDC: 666.763.002.2

REVZINA, F.S.

Investigating Ukrainian chromites from the Bug Valley deposit
as raw material for the manufacture of chrome-magnesite refrac-
tories. Sbor.nauch.trud. UNIIO no.5:262-268 '61. (MIRA 15:12)
(Southern Bug Valley—Chromite) (Firebrick)

YEGOROV, V.D., inzh.; KHROMOV, P.I., inzh.; REVZINA, F.S., inzh.

Using polymer materials in the production of steel wire rope.
Stal' 25 no.3:278-280 Mr '65. (MIRA 18:4)

1. Nauchno-issledovatel'skiy institut metaliznoy promyshlennosti
i Magnitogorskiy kalibrovchnyy zavod.

KHROMOV, P.I.; REVZINA, F.S.; RYABCHIKOVA, O.A.; YEGOROV, V.D.

Use of ropes on excavators with linear contact of the wires in strands. Gor.zhur. no.541-42 My '62. (MIRA 16:1)

1. Magnitogorskiy kalibrovchnyy zavod (for Khromov, Revsina, Ryabchikova). 2. Nauchno-issledovatel'skiy institut metiznoy promyshlennosti (for Yegorov).

(Wire rope)

BERMAN, Sh.M.; REVZINA, F.S.

Manufacturing and service-testing more compact magnesite-chromite products to be used in constructing vaults. Ogneupory 25 no.9:397-400 '60.

(MIRA 13:8)

1. Ukrainskiy nauchno-issledovatel'skiy institut ogneuporov.
(Firebrick--Testing)
(Open-hearth furnaces)

S/131/60/000/009/001/008/XX
B021/B052

AUTHORS: Berman, Sh. M. and Revzina, F. S.

TITLE: Production and Testing of High-density Magnesite-Chromite
Products for Furnace Crowns

PERIODICAL: Ogneupory, 1960, No. 9, pp. 397-400

TEXT: This work was conducted at UNIIO (Ukrainskiy nauchno-issledovatel'-
skiy institut ogneuporov - Ukrainian Scientific Research Institute of
Refractory Materials) under the guidance of A. S. Frenkel'. Among other
things, the relation between the density of magnesite-chromite products
and their stability has been studied. High-density products for furnace
crowns have been produced by the test plant of UNIIO. The chromite
contained 54.30% Cr_2O_3 , 13.60 Fe_2O_3 , and 15.77% MgO , and the powdered
magnesite contained 91.63% MgO . The bricks were baked between 1580° and
 1600°C . Their temperature of deformation was between 1570° and 1630°C
under a pressure of 2 kg/cm^2 . The average wear of magnesite-chromite

Card 1/2

Production and Testing of High-density
Magnesite-Chromite Products for Furnace
Crowns

S/131/60/000/009/001/008/XX
B021/B052

bricks was 21% higher than that of the normal product of the Chasov Yar Combine. Figs. 1 and 2, and Table 4 show the changes of their properties and their chemical and mineralogical compositions after use in open-hearth furnaces. Tests have demonstrated the dependability of high-density products for crowns, guaranteeing an increase in their stability by 20 - 25% even at standard baking temperatures. The best results were obtained with bricks containing 20% of chromite. There are 2 figures, 4 tables, and 5 Soviet references.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy institut ogneporov
(Ukrainian Scientific Research Institute of Refractory
Materials)

Card 2/2

S/137/62/000/005/065/150
A006/A101

1.1100

AUTHORS: Tarnavskiy, A. L., Ryabchikova, O. A., Revzina, F. S.

TITLE: Cold broaching of shaped wire through profiled non-driving rolls

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 5, 1962, 36, abstract 5D205
("Tr. Konferentsii po metizn. proiz-vu, 1959", Chelyabinsk, 1961,
132-136)

TEXT: The technique is analyzed of manufacturing Z-shaped wire. The advantages of the suggested method are described. The initially developed grooving (schematic drawing presented) showed a number of deficiencies. Therefore, a new grooving system is now being developed. The wire produced according to the new technique offers a higher quality. It is absolutely free of marten-site areas, external and internal cracks. Its structure is sorbite with a thin ferrite network. The grains are of normal size. Data are given on the production costs of the wire, manufactured by the conventional and the new technique.

N. Yudina.

[Abstracter's note: Complete translation]

Card 1/1

REVZINA, K.G.

Determination of the decarbonized layer in 9KhS tool steel.
Stan. 1 instr. 35 no.3:48 Mr'64. (MIRA 17:5)

VDOVETS, F.Ye., inzh.; REVZINA, L.A., inzh.

New structures for protecting the shores of the Black Sea.
Transp.stroi. 15 no.10:19-21 0 '65.

(MIRA 18:12)

AID P - 4376

Subject : USSR/Power Engineering

Card 1/1 Pub. 110 a - 2/17

Authors : Karasina, E. S., S. I. Mochan, Kand. Tech. Sci., and
O. G. Revzina, Eng. All-Union Heat Engineering Institute
and Central Boiler and Turbine Institute.

Title : On establishing the heat transfer ratio in boiler heating
surfaces.

Periodical : Teploenergetika, 5, 8-13, My 1956

Abstract : The difference in the heat transfer ratio in laboratory
experiments and that actually obtained in industrial
installations is discussed. Causes, such as ratios of
dirt, sediments, etc. are explained. The functions of
one- and two-stage steam preheaters and economizers are
described. Two diagrams, three tables.

Institution : ~~DOX~~ 1. Vsesoyuznyy teploekhnicheskii institut i Tsentral'nyy
kotloturbinnyy institut.

Submitted : No date

REVZINA, O.G.

AUTHOR: Mochan, S.I., Candidate of Technical Sciences and
Revzina, O.G., Engineer. 114-8-3/16

TITLE: Test results and design procedure for surface steam
coolers (atemperators). (Rezultaty ispytaniy i metodika
rascheta poverkhnostnykh parookhladiteley)

PERIODICAL: "Energomashinostroyeniye" (Power Machinery Construction),
1957, Vol.3, No.8, pp. 11 - 15 (U.S.S.R.)

ABSTRACT: New sets mostly use water injection for the main atemper-
ators, but surface types are still important for medium power
sets and also as the first stage when two-stage control of the
superheat temperature is used.

Present methods of designing atemperators is complicated
and not well supported by experimental data. This article
describes work on simplification of the procedure and on making
it more accurate by analysis of available experimental data.
Doctor of Technical Sciences, Professor S.S. Kutateladze part-
icipated in this work. Data on the testing of horizontal
atemperators cooled by feed water are given in a table. The
table includes test results obtained by A.P. Baranov, I.K.
Barshteyn, I.E. Belinskiy, S.G. Beskin, G.A. Burgvits, I.E.
Dubovskiy, E.M. Kazarnovskiy, N.V. Mishin, M.B. Patronova,
M.M. Rubin, I.E. Semenovker, I.P. Shapiro and P.A. Shemyakin.

Card 1/5

Test results and design procedure for surface steam coolers.
(Cont.) 114-8-3/16

Most of the data relate to atemperators located in a chamber of saturated steam. Tests were also made on atemperators of boiler H31-C-60-34 located in a steam dome and of the atemperator of boiler KO-IV-200 located in the intermediate collector. Cross-sections of the atemperator tested are shown in Fig. 1 and experimental values of the heat transfer coefficients for all the tested units in a saturated steam chamber are shown in Fig.2A.

For water speeds above 2 m/sec the scatter of the experimental points increases and many of them lie below the straight line corresponding to lower water speeds. Because of the unusual nature of the changes in the experimental values of the heat transfer coefficients they are compared with calculated values by determining the coefficient of utilisation. Values of this coefficient for the tests plotted in 2A are plotted in Fig.2B. Over a large part of the range there is an obvious tendency for the utilisation coefficient to increase with water speed. This indicates the presence of circumstances which cause important changes in the operating conditions of atemperators compared with those assumed for the purposes of calculation. Possible causes

Card 2/5

Test results and design procedure for surface steam coolers.
(Cont.) 114-8-3/16

shows that the procedure of calculation used does not have very great errors, and they cannot be the cause of the observed differences between experimental and theoretical values of the heat transfer coefficient.

On examination of possible causes of this difference it seems most likely that they result from special features of the hydro-dynamics in the steam collector. This is confirmed by the results given in Fig.5 relating to determinations of heat transfer coefficient in boilers which, unlike modern patterns, use high steam speeds. For these atemperators the experimental values of the heat transfer coefficients at low loads are much higher than those given in Fig. 2. Special tests should be carried out to confirm the hypothesis that hydro-dynamics in the chamber has a marked influence on heat transfer in atemperators. Until such a verification has been made there is no need to correct the design procedure of such atemperators.

Vertical atemperators are then considered; in their design it would be necessary to verify whether the pipe works under conditions of laminar or of turbulent flow. A brief examination of this question shows that turbulent film flow predominates. A formula is recommended for the determination of the heat

Card 4/5

Test results and design procedure for surface steam coolers.
(Cont.) 114-8-3/16

transfer coefficient from the steam to the wall in vertical
atemperators.

Atemperators cooled by boiling water are then considered:
they have special features when determining the coefficient of
heat transfer from the wall to the water. Heat transfer on
unoxidised tubes was investigated in a number of experimental
works. Values of the heat transfer coefficient calculated by
various formulae are given in Fig.6 which was constructed by
Candidate of Technical Sciences V.M. Borishanskiy and Engineer
V.N. Golovin. Finally, a formula is recommended for calculat-
ing heat transfer from unoxidised tubes and a design formula
is given for determinations when the walls of the tubes are oxi-
dised.

There are 6 figures, 1 table and 5 Slavic references.

AVAILABLE: Library of Congress
Card 5/5

MOCHAN, S.I., kand.tekhn.nauk; REVZINA, O.G., inzh.

Choice of gas and air speeds and possibilities for standardizing
the dimensions of gas pipes. Teploenergetika 12 no.10:32-37 0
1965. (MIRA 18:10)

1. Tsentral'nyy kotloturbinnyy institut.

REYZDINA, O.G.

✓ 3888. DETERMINATION OF HEAT TRANSFER COEFFICIENTS TO THE HEATING SURFACES OF
BOILER INSTALLATIONS. Karasiga, E.S., Mochan, S.I., and Reznicek, O.G.
(Teploenergetika (Heat Pwr Engng, Moscow), May 1956, vol. 3, 8-15). The
reasons for the amendments of heat transfer coefficients adopted in the
"Standard Method of Thermal Calculation" are set out, account being taken of
the difference between actual operating conditions of boiler installations and
laboratory heat exchange tests. (L). *True* C.E.A.

SOV/96-60-2-6/24

AUTHORS: Mochan, C. I., Candidate of Technical Sciences, and
Revzina, O. G., Engineer

TITLE: Calculation of the Aerodynamic Resistance of Heating
Surface Elements

PERIODICAL: Teploenergetika, 1960, Nr 2, pp 34-40 (USSR)

ABSTRACT: Previous work on calculation of the aerodynamic resistance of tube bundles is reviewed. The methods of the 1949 Standard do not cover the necessary range of tube bundle geometry nor, of course, do they include more recent published work. Alternative formulae were proposed by the All-Union Thermo-Technical Institute and published in Teploenergetika, Nr 9, 1954. These formulae have a better experimental basis; the method of selecting the determining temperature is the same as in thermal calculations. However, a number of defects of the 1954 formulae are pointed out. Moreover, since they were published further experimental work has been done, particularly that of Kays, London, and Lo, Trans. ASME, 1954, on the resistance of closely-packed bundles of tubes. It was, therefore, decided to attempt to formulate simpler and more convenient design formulae

Card 1/7

SOV/96-60-2-6/24

Calculation of the Aerodynamic Resistance of Heating Surface
Elements

for practical conditions. The governing temperature was taken to be the flow temperature, and as in the 1954 formulae the influence of the number of rows on the resistance was taken from the 1949 standards. After the new formulae had been derived and a draft standard method had been drawn up, further results were published by Kazakevich in Teploenergetika Nr 8, 1958, for tubes in the honeycomb arrangement, including closely packed bundles. Kazakevich offered corrections to the 1954 formulae and his results covered a hitherto neglected range of great interest. An approximate comparison made between the draft standard formulae and Kazakevich's experimental data showed that the new test results make little difference to the formulae over the ranges which are of practical interest. It was accordingly decided not to hold up the draft standard method, but to make corrections later if necessary, when tabulated data had been obtained from Kazakevich for tubes in the honeycomb arrangement. This article gives the formulae finally recommended for making the calculations, and in the case of the honeycomb arrangement of tube bundles gives a

Card 2/7

SOV/96-60-2-6/24

Calculation of the Aerodynamic Resistance of Heating Surface Elements

comparison with formulae included in the draft standard method. The method of working out the experimental data is explained and it is shown that there is considerable scatter in the experimental results, which may reach 10% for low values of Reynolds number. The selection of constants to be used in Eq (1) when using bundles of tubes in the honeycomb arrangement is first considered. The choice of coordinates used in Fig 1 to compare experimental and recommended values for the constant K in Eq (1) is explained. The solid lines in Fig 1 show the relationship finally recommended for the standard method, allowing for Kazakevich's experimental data; the dotted lines correspond to formulae included in the first draft standard method. The difference is small in regions of practical importance and is greatest for close tube bundles. The great scatter of the points when calculated by the formulae of the All-Union Thermo-Technical Institute and Kazakevich is confirmed by Fig 3 which plots the difference between the calculated and experimental values

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of Euler's criterion. Thus, the new recommended formulae ensure good agreement with experimental data when making use of the most convenient determining parameter. Therefore, the values of resistance coefficient for tubes in the honeycomb arrangement given by Eqs (2) are recommended for the standard method. The field of application of the recommended formulae is greater than that of the formulae of the All-Union Thermal Technical Institute and Kazakevich. Formulae (2) was used to construct the nomogram of Fig 4 which provides direct determination of the pressure drop in tube bundles of honeycomb arrangement. Tubes in the square arrangement are then considered. It is stated that a convenient determining parameter is the ratio of the transverse gap to the longitudinal. A graph of the exponent n in formula (1) as a function of this parameter is plotted in Fig 5; the scatter of experimental values is very great. However, certain values are recommended for n and were used to determine the coefficient K_1 , which is plotted in Fig 6. Finally, formulae (3) are recommended

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for calculating the resistance coefficient of tube bundles in the square arrangement. The range of validity of the formulae is wide enough for practical purposes. The agreement between experimental and calculated values of resistance coefficients for tube bundles in the square arrangement will be seen from the graph in Fig 3. Clearly the accuracy is as good as that obtained with the formulae of the All-Union Thermo-Technical Institute, and the procedure is much more simple. A nomogram for determining the resistance coefficient of tube bundles in the square arrangement constructed from formulae (3) is given in Fig 7. Most of the experimental work on the resistance of tube bundles has been carried out at Reynolds numbers ranging from $5 - 15 \times 10^3$ to $30 - 60 \times 10^3$, and only a few tests have been made at lower values. The rates of gas and air flow over heating surfaces in modern boilers usually correspond to Reynolds numbers of $3 - 5 \times 10^3$. A special check was therefore made of the agreement between the experimental and calculated values within the range

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of Reynolds number of $3 - 20 \times 10^3$. The origins of the data used are stated. Existing formulae for calculating the frictional resistance during flow in tubes and ducts are of limited validity and inconvenient in use. In making aerodynamic calculations on boilers it is necessary to have a reasonably accurate knowledge of the frictional resistance in the air heaters, whilst approximate calculations usually suffice for the other parts. The resistance of tubular-and plate-type air heaters usually lies in the transitional zone. The approximate formulae (4) may be used for calculating the frictional coefficient for values of Reynolds number corresponding to the flow of air and flue gases at rates of 5 - 30 m/sec for low temperatures (up to 300°C) and up to 45 m/sec for higher temperatures. The values of the coefficient of friction as a function of the Reynolds number calculated by the present simplified procedure are compared graphically with previously published data of Murin in Fig 9. Fig 10 gives a nomogram for the approximate calculation of the pressure drop in pipes and ducts; it is derived from formula (4).

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The nomogram is valid for air and flue gases under the same conditions as Eq (4). Corrections to the pressure drop to allow for changes in the temperature of the flow are then considered and expression (5) is recommended. The additional acceleration that results from expansion of the gas when it is heated was discussed. In practically all cases the corrections to the pressure on this account do not exceed 10% of the bundle resistance, and are usually much less. Accordingly, in making calculations on the resistance of boilers and ordinary heat exchangers it is seldom necessary to correct for the difference in losses due to acceleration and change of velocity head. There are 10 figures and 7 references, 5 of which are Soviet and 2 English.

ASSOCIATION: Tsentral'nyy kotloturbinnyy institut (Central
Boiler Turbine Institute)

Card 7/7

BREUSOV, O.N.; REVZINA, T.V.; DRUZ', N.A.

Synthesis and some properties of lithium tellurite. Zhur. neorg.
khim. 10 no.9:1990-1992 S '65. (MIRA 18:10)

L 22142-66

EWT(m)/ETC(f)/ENG(m)/EWP(t)

IJP(c)

RDW/JD/JG

ACC NR: AP6012956

SOURCE CODE: UR/0078/65/010/009/1990/1992

AUTHOR: Breusov, O. N.; Revzina, T. V.; Druz', N. A.

ORG: none

TITLE: Synthesis and certain properties of lithium tellurite

SOURCE: Zhurnal neorganicheskoy khimii, v. 10, no. 9, 1965, 1990-1992

TOPIC TAGS: inorganic synthesis, tellurium compound, lithium compound, x ray diffraction analysis, specific density

ABSTRACT: Lithium tellurite was obtained by reacting a solution of "chemically pure" lithium oxide hydrate with an excess of freshly precipitated tellurium dioxide. Later the excess of tellurium dioxide was filtered off and the solution of lithium tellurite evaporated to near dryness. To determine the properties of lithium tellurite, it was made into a more pure product by first being dissolved in water; the solution was filtered and evaporated in a carbon dioxide-free atmosphere. The preparation obtained in this manner contained 84.18% TeO_2 and 15.75% Li_2O (theoretical 84.23% and 15.77%, respectively). The pycnometric density of lithium tellurite, determined in toluene, was equal to 3.83 ± 0.02 . Biaxial crystals are formed with a negative indicatrix of $N_g > 1.78$ and $N_p = 1.676 \pm 0.003$. The lithium tellurite was also studied by x-rays. The x-ray diffraction pattern of Li_2TeO_3 indicated rhombic syngony. The parameters of the unit cell were: $a = 8.79 \text{ kX}$;

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UDC: 546.34'244:548.736

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ACC NR: AP6012956

0
b = 10.52 kX; c = 7.10 kX. The number of formula units found in the unit cell were $z = 7.989 \approx 8$. The calculated density was $\rho_{\text{calculated}} = 3.836$. The probability spatial group was $D_{2d}^2 = P 2_1 2$. The solubility of Li_2TeO_3 in the 30-80 C range, in water, was studied. The compound does not form crystalline hydrates and dissolves congruently. Its solubility decreases with an increase in temperature. Orig. art. has: 1 figure and 3 tables. [JPRS]

SUB CODE: 07 / SUHM DATE: 10Apr64 / OTH REF: 002

Card 2/2

BK

REVZINA, V.A.

LEMBERG, Ya.M., kandidat meditsinskikh nauk; REVZINA, V.A.

Injuries of the hand and fingers in workers of the coal industry.
Ortop.travm. i protez. 17 no.6:129 N-D '56. (MIRA 10:2)

1. Iz khirurgicheskoy propedevticheskoy kliniki Stalinskogo meditsin-
skogo instituta.

(COAL MINES AND MINING--ACCIDENTS)

(HAND--WOUNDS AND INJURIES)

MIKHALITSINA, Ye.S.; REVZINA, V.G.; YURGENSON, A.A.

Parkerizing austenite steels. Mashinostroitel' no.8:35 Ag
'62. (MIRA 15:8)

(Phosphate coating)


S/117/62/000/008/005/005
1007/1207

AUTHORS: Mikhalitsina, Ye.S., Revzina, V.G., and Yurgenson, A.A.

TITLE: Phosphate coating of austenitic steel

PERIODICAL: Mashinostroitel', no.8, 1962, 35

TEXT: Results are reported of experimental investigations on the phosphate coating of austenitic steels, in order to improve working conditions, reduce gripping (seizing) and wear, and increase the service life of phosphate-coated tools. Special indications on the phosphate-coating technology, and test results are presented. It was found that austenitic steels may be successfully phosphate-coated by applying special preparatory methods (electrolytic degreasing, pickling) and by utilising special electrolytes in electrical solutions. There is 1 table.



Card 1/1

REVZINA, Vera Isakovna, kand. sel'skokhozyaystvennykh nauk; SULKOVSKAYA, M.A., red.; BALLOD, A.I., tekhn. red.

[Increasing stockbreeding on flax growing collective farms; practices of the "Krasnyi putilovets" and "Rossiya" Collective Farms, Kashin District, Kalinin Province] Pod"em shivotnovodstva v l'novodcheskikh kolkhozakh; opyt kolkhozov "Krasnyi putilovets" i "Rossiya" Kashinskogo raiona Kalininskoj oblasti. Moskva, Gos. izd-vo sel'khoz. lit-ry, 1958. 39 p. (MIRA 11:8)

(Kashin Province--Stock and stockbreeding)

PETROVSKIY, B.V., prof.; SOLOV'YEV, G.M., prof.; ROBOTKOV, A.A.; REVZIS, M.G.

Treatment of secondary infundibular stenosis. Khirurgiia 40 no.1:
31-39 Ja '64. (MIRA 17:11)

1. Gospi'tal'naya khirurgicheskaya klinika (zav. - deystvitel'nyy
chlen AMN SSSR prof. B.V. Petrovskiy) i Moskovskogo i ordena Lenina
meditsinskogo instituta imeni Sechenova.

MEKHITIYEV, M.M.; REVZIS, M.G.; KRYLOV, V.S.

Vasorenal hypertension induced by fibromuscular hyperplasia
of the renal artery. Azerb. med. zhur. 41 no. 10:60-64 O '64
(MIRA 19:1)

1. Iz nauchno-issledovatel'skogo instituta klinicheskoy i eks-
perimental'noy khirurgii i gosital'noy khirurgicheskoy kliniki
(direktor - deys'vitel'nyy chlen AMN SSSR B.V. Petrovskiy)
I Moskovskogo ordena Lenina meditsinskogo instituta imeni
Sechenova.

KOROTKOV, A.A.; REVZIS, M.G. (Moskva)

Types of pulmonary artery stenosis. Arkh. pat. 26 no.9:35-41
'64. (MIRA 18:4)

1. Gospital'naya khirurgicheskaya klinika I Moskovskogo ordena
Lenina meditsinskogo instituta imeni Sechenova.

KUZNETSOVA, G.M.; REVZIS, M.G. (Moskva)

Arteritis of the lesser circulation. Klin.med. no.4:111-115
'62. (MIRA 15:5)

1. Iz patologoanatomicheskogo otdeleniya 1-y gorodskoy klinicheskoy
bol'nitsy imeni N.I. Pirogova (glavnyy vrach - zasluzhennyy vrach
RSFSR L.D. Chernyshev) i patologoanatomicheskogo otdeleniya 4-y
gorodskoy klinicheskoy bol'nitsy (glavnyy vrach G.F. Papko, nauch-
nyy rukovoditel' - prof. Ya.L. Rapoport).
(PULMONARY ARTERY---DISEASES)

SKACHILOVA, N.N.; REVZIS, MG.

Chronic forms of infectious allergic myocarditis. Sov.med. 26
no.8:19-24 Ag '62. (MIRA 15:10)

1. Iz Tsentral'nogo ordena Lenina instituta gematologii i pereli-
vaniya krovi (dir. - deystvitel'nyy chlen AMN SSSR prof. A.A.
Bagdasarov[deceased]) i 64-y gorodskoy bol'nitsy (glvanny vrach
G.V.Rodygina), Moskva.
(ALLERGY) (HEART--DISEASES)

GALITSKIY, A.B.; REVZIS, M.G.

Essential pulmonary hemosiderosis as a cause of pulmonary hemorrhage.
Grud.khir. no.4:111-113 J1-Ag '62. (MIRA 15:10)

1. Iz gosptal'noy khirurgicheskoy kliniki (zav. - prof. A.V. Gulyayev) pediatricheskogo fakul'teta II Moskovskogo meditsinskogo instituta imeni H.I.Pirogova i 64-y gorodskoy klinicheskoy bol'nitsy (glavnyy vrach G.V.Rodygina).

(LUNGS--DISEASES)

(HEMOCHROMATOSIS)

(HEMORRHAGE)

REVZNER, M.

Intermediate (bainitic) transformation of austenite. L. M. Revzner, T. D. Kubyshkina, G. M. Rovenskii, and A. I. Samonov. *Metallurg. i Obrabotka Metal.* 1956, No. 10, p. 2-20. This is largely a review of 38 Russian and other papers, but contains some new exptl. work. In a series of steels contg. 0.3-0.5% C and 6.56 Ni or 3 Cr, or 2.69 Si or 1.08 Al the enrichment in C of the untransformed austenite was detd. for temps. of isothermal transformation ranging from 160 to 500° by detg. the change in lattice parameter. The enrichment was greatest for Al and least for Cr or Ni, but in each case the max. effect occurred for a temp. of about 350 to 400°. Data on the rates of austenite transformation and enrichment at temps. of 230 to 280° were given for 2 steels. A. G. Guy

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ca

Celerimeter. B. A. Revsnyk. Russ. 29,623, May 10, 1982. Construction details.

ASH 15A METALLURGICAL LITERATURE CLASSIFICATION

GROUPED BY

RESEARCH GROUP

COLLECTOR'S NAME

DATE OF COLLECTION

7177K, 1.

29207. Postroyka katekov potochnym metodom. Proaktivnoye i postroyka velikikh
surov, Vol.1, 1949, S. 5-14

SO: Letopis' Zhurnal'nykh Statey, Vol. 39, Moskva, 1949

GLOZMAN, Moisey Kalmanovich; SOKOLOV, Vladimir Fedorovich; PALLER, A.M.,
retsenzent; REVZYUK, G.A., retsenzent; RIMMER, A.I., nauchnyy red.;
LISOK, E.I., red.; FRUMKIN, P.S., tekhn. red.

[Building a ship hull on slipways] Postroika korpusa sudna na stapela.
Leningrad, Gos. soiuзное izd-vo sudostroit. promyshl., 1961. 195 p.
(MIRA 14:8)

(Hulls (Naval architecture))

DENISOV, Rodion Osipovich; BUKOVSKIY, A.D., inzh., retsenzent;
REVZYUK, G.A., inzh., retsenzent; ADLERSHTEYN, L.TS.,
nauchn. red.; NIKITINA, M.I., red.

[Use of mathematical statistics in the technology of building ship hulls] Primenenie matematicheskoi statistiki v tekhnologii sudovogo korpusostroeniia. Leningrad, Sudostroenie, 1965. 175 p. (MIRA 18:7)

GLOZMAN, Moisey Kalmanovich; SOKOLOV, Vladimir Fedorovich; PALLER, A.M., retsenzent; REVZYUK, G.A., retsenzent; RIMMER, A.I., nauchnyy red.; LISOK, E.I., red.; FRUMKIN, P.S., tekhn. red.

[Building of a ship hull on slipways] Postroika korpusa sudna na stapele. Leningrad, Sudpromgiz, 1961. 195 p.

(MIRA 15:7)

(Hulls (Naval architecture))

REVZYUK, G.A., inzhener

Selecting an air pressure standard for testing the water-tightness of ship sections. Standartizatsiia no.1:49-52
Ja-F '55. (MLRA 8:6)

(Ships--Standards)

АВТОРИТЕТ: АЛЕКОВ, В.А., инж.

Particularities of the strength of shaft linings in shafts sunk
by the boring method. Shokht. stroi. 9 no.8:19 21 Ag '65.
(MIRA 18:8)

1. Vsesoyuznyy nauchno-issledovatel'skiy marksheyderskiy in-
stitut.

TOMASSI, Witold; REWAJ, Maria

Studies on the electrolysis of cupric chloride CuCl_2 by using the powder anode. Przem chem 41 no.11:636 N '62.

1. Katedra Chemii Fizycznej, Politechnika, Warszawa, i Katedra Chemii Fizycznej, Politechnika, Szczecin.